

Atty. Docket No. Q62617
PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/758,434

REMARKS

Applicant thanks the Examiner for acknowledging his claim to priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document.

Claims 1-21 are all the claims pending in the application.

Claims 3-5 and 9-11 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

Claim 3 depends on claim 1. A skilled artisan would appreciate that the limitation "the color association definition" in line 5 of claim 3 refers to the color association definition obtained in the color association definition obtaining step of claim 1. In addition, the "smoothed second color data" mentioned in line 9 of claim 3 provides sufficient antecedent basis for "the smoothed second color data" in line 16 of claim 3; and "a new color association definition" mentioned in lines 7-8 of claim 3 provides sufficient antecedent basis for "the new color association definition" in lines 16-17 of claim 3. Applicant has amended the limitation "which are more than the number of pairs of the mutually associated first color data and the smoothed second color data" to overcome the §112, second paragraph rejection.

Claim 4 depends on claim 1. A skilled artisan would appreciate that "the color association definition" in lines 17-18 of page 42 refers to the color association definition obtained in the color association definition obtaining step of claim 1; and the "finally produced profiled" in lines 20-21 of page 42 refers to the profiled produced by the profile producing step of claim 1. Applicant has amended the limitation "which are equal in number to pairs of the

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mutually associated first color data and the second color data" to overcome the §112, second paragraph rejection.

Claim 5 depends on claim 1. A skilled artisan would appreciate that "the finally produced profile" in line 10 of page 43 refers to the profiled produced by the profiled producing step of claim 1, and "the color association definition" in line 16 of page 43 refers to the color association definition obtained by the color association definition obtaining step of claim 1. Applicant has also amended the limitation "equal in number to pairs of the mutually associated first color data and the second color data" to overcome the §112, second paragraph rejection.

Similar arguments apply to claims 9-11. Applicant has also amended claims 9-11 to overcome the §112, second paragraph rejections.

Claims 1-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,072,589 to Rozzi. Applicant respectfully traverses these rejections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

Claim 1 of the present application recites a profile producing method comprising a profile producing step of producing a profile defining an association between the first color data representative of coordinates on a device-dependent color space and smoothed second color data representative of coordinates on a common color space.

The present invention is directed to a profile producing method and apparatus for producing a profile representative of the association between color data and colors on a color image. As shown in Figs. 1 and 6, an input profile and an output profile are stored in a personal computer 20. Image data of RGB obtained by a color scanner 10 is converted temporarily into

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image data on an XYZ space, a common color space, by the input profile, and the image data on the XYZ space is then converted into the image data of CMYK by the output profile and then transferred to a color printer 30. As shown in Figs 7 and 8, a smoothing process is used to smooth the second color data (XYZ data) to the first color data (CMYK data).

Rozzi provides a method for characterizing a printer using a reduced number of text patches to simulate the printing characteristics. As shown in Fig. 1 of Rozzi, a first set of transformation procedures 22 transforms a set of coordinates from a device-independent color space, e.g., the XYZ color space, to an index space, e.g., a calibrated RGB color space. The index space is selected to facilitate interpolation while using a render table 20. The render table 20 is used to convert coordinates in the index space to an encoded device color space. The second set of transformation procedures 24 transforms the encoded device color space coordinates into the final device color coordinates in a device color space, e.g., CMYK.

In the claimed inventions, it is the second color data, representative of coordinates on a common color space, such as XYZ color space, that is smoothed. However, in Rozzi, it is the data in an index space, such as a calibrated RGB color space, that is smoothed.

The Examiner has agreed that Rozzi does not teach the smoothing of the second color data representative of coordinates on the common color space to the first color data. However, the Examiner has asserted that it would have been obvious to one skilled in the art at the time the invention was made to consider the smoothing means in Rozzi as teaching the smoothing of the second color data (XYZ) to the first color data (RGB), since the rendering table is the inverted

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conversion of the first table which converts the independent color space XYZ to the dependent color RGB. Applicant respectfully disagrees.

First, given the different goals of Rozzi and the present application, this is no suggestion or motivation for a skilled artisan to modify Rozzi to smooth XYZ data, instead of RGB data.

Second, in Rozzi, transformation from XYZ values to RGB values is selected to convert the reference color space into a better space for interpolation (Rozzi, col. 5, lines 33-37). Thus, modifying Rozzi from smoothing RGB data, a more favored space for interpolation, to smoothing XYZ data, as the Examiner has asserted, would render Rozzi unsatisfactory for its intended purpose. However, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900 (Fed. Cir. 1984).

Therefore, claim 1 and its dependent claims 2-7 and 16-18 are patentable. Claims 8-15 and 19-21 are patentable for the same reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this AMENDMENT UNDER 37 C.F.R. § 1.111 is being facsimile transmitted to the U.S. Patent and Trademark Office this 12th day of November, 2004.

[Signature]
Thea K. Wagner